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US. Patent and Trademark Office U.S. DEPARTMENT OF COMMERCE

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Complete if Known

Application Number 10/560.250

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Application Number 10/560,250

Filing Date December 12, 2005

First Named Inventor Glen NEMEROW

Art Unit 1645

Examiner Name To Be Assigned

(Use as many sheets as necessary)

Sheet 1 of 10 Attorney Docket Number 5410-007 NATL

			U. S. PATENT	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number Publication Date MM-DD-YYYY Number-Kind Code <sup>2</sup> (# known)		Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/F.S./	AA	US-5,543,328	08-06-1996	McClelland et al.	
	AB	US-5,731,190	03-24-1998	Wickham et al.	
	AC	US-5,756,086	05-26-1998	McClelland et al.	
	AD	US-5,801,029	09-01-1998	Mccomick et al.	
1	AE	US-5,919,676	07-06-1999	Graham et al.	
<del> </del>	AF	US-5,922,576	07-13-1999	He et al.	
	AG	US-5,965,431	10-12-1999	Markl et al.	
	AH	US-5,965,541	10-12-1999	Wickham et al.	
	Al	US-5,994,106	11-30-1999	Kovesdi et al.	
	AJ	US-5,998,205	12/1999	Hallenbeck et al.	
	AK	US-6,057,155	05-02-2000	Wickham et al.	
	AL	US-6,080,569	06-27-2000	Graham et al.	
_	AM	US-6,638,762	10-28-2003	Chang et al.	01
	AÑ	US-6,731,190	05-04-2004	Yamashita et al.	
	AO	US-6,156,497	12-05-2000	Kaleko	
	AP	US-5,935,935	08-10-1999	Connelly et al.	
V	AQ	US20020137213	09-26-2002	Hallenbeck et al.	

## FOREIGN PATENT DOCUMENTS

Examiner	Cite	Foreign Patent Number	Publication Date	Name of Patentee or	Pages, Columns, Lines,	_τ6
Initials*	No.1	Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	
	AR	WO2000US42208	05-31-2001	Milnes et al.		
	AS	W00199843	05-03-2001	Barbas et al.		
	AT	WO0183729	08-11-2001	Nemerow et al.		
	AU	WO0192299	0612-2081	Jakubczak et al.		
	AV	WO02067861	09-06-2002	Ennist et al.		
	ÂW	WO03062400	07-31-2003	Kaleko et al.		
	AX	WQ2840558	07-13-2000	Randad et al.		
	AY	WO9500655	01-05-1995	Graham et al.		

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ì	Signature	/Fereydoun Sajjadi/	Considered	11/19/2007

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				Application Number	10/560,250		
11	NFORMATION DIS	CLO	SURE	Filing Date	December 12, 2005		
S	STATEMENT BY APPLICANT		First Named Inventor	Glen NEMEROW			
				Art Unit	1645		
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Sheet	2	of	10	Attorney Docket Number	5410-007 NATL		

			U.S. PATENT	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number  Number-Kind Code <sup>2 (Il known)</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/F.S./	AX	US- US20020167814	11-14-2002	Ching	
1	BA	US- US200020193327	12-19-2002	Nemerow et al.	
	BB	US- US20030157688	08-21-2003	Von Seggern et al.	
A_	ВС	US- US20040002060	01-01-2001	Kaleko et al.	
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	BD	WO9534671	12-21-1995	Kovesdi et al.		
	BE	WO9617053	06-06-1996	Hallenbeck et al		
	BF	WO9622378	. 07-25-1996	Bedleu et al.		
	BG	WO9813499	04-02-4598	Nemerow et al.		
	ВН	WO9854346	12-05-4998	Wickham et al.		
	BI	WO9925860	05-27-1999	Chang et al.		
	8J	W09959734	08-12-1999	Curiel et al.		
	ВК	WO2004US11125	10-28-2004	Bremmon et al.		

	Total Control		
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13	INFORMATION DISCLOSURE			Filing Date	December 12, 2005
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Examiner	/Fereydoun Sajjadi/	Date	44/40/2007	
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S	STATEMENT BY APPLICANT		First Named Inventor	Glen NEMEROW		
				Art Unit	1645	
	(Use as many sheets as necessary)		Examiner Name	To Be Assigned .		
Sheet	4	of	10	Attorney Docket Number	5410-007 NATL	

		NON PATENT LITERATURE DOCUMENTS		
Examiner Initials*				
/F.S./	BL	ADRIAN et al., "Cryo-electron microscopy of viruses" Nature, Vol. 308, pp. 32-36, March 1, 1984, Nature Publishing Group, (1984).		
	ВМ	ARNBERG et al., "Fiber genes of adenoviruses with tropism for the eye and the genital tract" Virol. 227, pp. 239-244 (1997)		
	BN	ARNBERG et al., "Adenovirus Type 37 Usaes Sialic Acid as a Cellular Receptor" Journal of Virology, Vol. 72, No. 1, pp. 42-48, American Society of Microbiology (2000).		
	ВО	ATSCHUL et al.,"Basic Local Alignment Search Tool", Journal Molecular Biology, Vol. 215:pp. 403-410 Academic Press Limited, (1990).		
	ВР	BAI et al., "Mutations That Alter an Arg-Gly-Asp (RGD) Sequence in the Adenovirus Type 2 Penton Base Protein Abolish Its Cell-Rounding Activity and Delay Virus Reproduction in Flat Cells", <i>Journal of Virology</i> Vol. 67, No. 9, pp.:5198-5205, American Society of Microbiology (1993).		
	BQ	BELOUSOVA et al., "Modulation of Adenovirus Vector Tropism via Incorporation of Polypeptide Ligands into the Fiber Protein", <i>Journal of Virology</i> , Vol. 76, No. 17, pp:8621-8631. American Society of Microbiology (2002).		
	BR	BERGELSON et al., "Isolation of a Comon Receptor for Coxsackie B Viruses and Adenoviruses 2 and 5", Science, Vol. 275:pp. 1320-1323 (1997)		
	BS	BETT et al., "An efficient and flexible system for construction of adenovirus vectors with insertions or deletions in early regions 1 and 3" <i>Proc. Natl. Acad. Sci USA</i> 91:8802-8806 (1994)		
	ВТ	BEWLEY et al., "Structural Analysis of the Mechanism of Adenovirus Binding to Its Human Cellular Recepto, CAR", Science Vol. 286, pp.1579-1583, (1999).		
	BU	CARIILLO et al, "The Multiple Sequence Alignment Problem in Biology", SIAM J. Applied Math, Vol. 48, No. 5, pp.1073-1082 (1988).		

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Examiner Signature	/Fereydoun Sajjadi/	Date Considered	11/19/2007

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		NON PATENT LITERATURE DOCUMENTS
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
/F.S./	BV	CHAPPELL et al, "Crystal structure of reovirus attachment protein 61 reveals evolutionary relationship to adenovirus fiber" Europeaan Molecular Biology Organization, Vol. 21, pp. 1-11, (2002).
	BW	CHIU et al, "Structural Analysis of a Fiber-Pseudotyped Adenovirus with Ocular Tropism Suggests Differential Modes of Cell Receptor Interactions" <i>Journal of Virology</i> , Vol. 75, No. 11, pp. 5375-5380, American Society for Microbiology (2001).
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	ВҮ	CHOI et al, "A Generic Intron Increases Gene Expression in Transgenic Mice", Molecular and Cellular Biology, Vol. 11, pp. 3070-3074, American Society for Microbiology (1991).
	BZ	CHROBOCZEK et al, "Adenovirus Fiber" Current Topics in Microbiology and Immunology, Vol. 199, pp. 163-200 (1995).
	CA	COHEN et al, "The coxackievirus and adenovirus receptor is a transmembrane component of the tight junction" <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 98, pp. 15191-15196, (2001).
	СВ	DEVEREUX et al. "A comprehensive set of sequence analysis programs for the VAX" Nucleic Acids Research, Vol. 12, No. 1, pp. 387-395, IRL Press Limited (1984).
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	ÇD	EINFELD et al, "Reducing the Native Tropism of Adenovirus Vectors Requires Removal of both CAR and Integrin Interactions, <i>Journal of Virology</i> , Vol. 75, pp. 11284-11291, American Society for Microbiology (2001).
$\bigvee$	CE	GORZIGLIA et al, "Elimination of both E1 and E2a from Adenovirus Vectors Further Improves Prospects for In Vivo Human Gene Therapy", <i>Journal of Virology</i> , Vol. 70, No. 6, pp. 4173-4178, American Society for Microbiology (1996).

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NON PATENT LITERATURE DOCUMENTS							
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s). volume-issue number(s), publisher, city and/or country where published.					
/F.S./	CF	GRAHAM et al. "Characteristics of a human cell line transformed by DNA from human adenovirus type 5" Journal of General Virology, Vol. 36, pp. 59-72 (1977)/					
	CG	GREEN et al, "Evidence for a repeating cross-β sheet structure in the adenovirus fibre", <i>The EMBO Journal</i> , Vol. 2, No. 8, pp. 1357-1365, IRL Press Limited (1983).					
	СН	GRIBSKOV et al., "Sigma factors from E. coli, B. subtilis, phage SP01, and phage T4 are homologous proteins" Nucleic Acids Research, Vol. 14, No. 16, pp. 6745-6763, IRL Press Limited (1986).					
	CI	HAECKER et al, "In Vivo Expression of Full-Length Human Dystrophin from Adenoviral Vectors Deleted of All Viral Genes", Human Gene Therapy, Vol. 7, pp. 1907-1914, Mary Ann Liebert, Inc. (1996)					
	C1	HAVENGA et al, "Exploiting the Natural Diversity in Adenovirus Tropism for Therapy and Prevention of Disease", <i>Journal of Virology</i> , Vol. 76, No. 9, pp. 4612–4620, American Society for Microbiology (2002).					
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	CL	HE et al. "Interaction of coxsackievirus B3 with the full length coxsackivirus-adenovirus receptor", Nature Structural Biology, Vol. 8, No. 10, pp. 874-878, Nature Publishing Group (2001).					
	СМ	HE et al, "A simplified system for generating recombinant adenoviruses", <i>Proc. Natl. Acad. Sci.</i> , Vol. 95, pp. 2509-2514, The National Academy of Sciences (1998).					
	CN	HORTON et al, "Adenovirus E3 14.7K Protein Functions in the Absense of Other Adenovirus Proteins To Protect Transfected Cells from Tumor Necrosis Factor Cytolysis" <i>Journal of Virology</i> , Vol. 65, No. 5, pp. 2629-2639, American Society for Microbiology (1991).					
$\bigvee$	со	Huang et al, "A Single Amino Acid in the Adenovirus Type 37 Fiber Confers Binding to Human Conjunctival Cells" <i>Journal of Virology</i> , Vol. 73, No. 4, pp. 2798-2802, American Society for Microbiology (1999).					

Examiner Signature /Fereydoun Sajjadi/	Date Considered	11/19/2007
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Examiner	/Forovdoup Spijadi/	Date	11/19/2007	
Signature	/Fereydoun Sajjadi/	Considered	11/13/2007	1

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Oraw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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S	ubstitute for form 1449A/PTO			·	omplete if Known
				Application Number	10/560,250
11	NFORMATION DIS	CLO	SURE	Filing Date	December 12, 2005
S	STATEMENT BY APPLICANT			First Named Inventor	Glen NEMEROW
				Art Unit	1645
(Use as many sheets as necessary)				Examiner Name	To Be Assigned
Sheet	8	of	10	Attorney Docket Number	5410-007 NATL .

		NON PATENT LITERATURE DOCUMENTS						
Examiner Initials* Cite No.								
		REA et al, "Highly Efficient Transduction of Human Monocyte-Derived Dendritic Cells with Subgroup B Fiber-Modified Adenovirus Vectors Enhances Transgene-Encoded Antigen Presentation to Cytotoxic T Cells", Journal of Immunology, Vol. 166, pp. 5236-5244, The American Association of Immunologists (2001).						
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<b>V</b>	DI	SHILO et al., "DNA sequences homologous to vertebrate oncogenes are conserved in <i>Drosophila melanogaster</i> " <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 78, No. 11, pp. 6789-6792, Biochemistry (1981).						

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Signature	/Fereydoun Sajjadi/	Considered	11/19/2007

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11	NFORMATION DIS	CLO	SURE	Filing Date	December 12, 2005	
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			ecessary)	Examiner Name	To Be Assigned	
Sheet	9	of	10	Attorney Docket Number 5410-007 NATL		

		NON PATENT LITERATURE DOCUMENTS						
Examiner Cite Initials* No.		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.						
/F.S./	רם	SMITH et al., "Comparison of Biosequences", Advances in Applied Mathematics, Vol. 2, pp. 482-489, Academic Press, Inc. (1981).						
	DK	STEINMAN et al., "Tolerogenic Dendritic Cells" Annual Rev. Immunol., Vol. 21, pp. 685-711, Annual Reviews (2003).						
	DL	STEVENSON et al., "Human Adenovirus Serotypes 3 and 5 Bind to Two Different Cellular Receptors via the Fiber Head Domain" <i>Journal of Virology</i> , Vol. 69, No. 5, pp. 2850-2857, American Society for Microbiology (1995).						
	DM	STEWART et al, "Digitally Collected Cryo-Electron Micrographs for Single Particle Reconstruction", Microscopy Research and Technique, Vol. 49, pp. 224-232, Wiley-Liss, Inc. (2000).						
	DN	STEWART et al. "Cryo-EM visualization of an exposed RGD epitope on adenovirus that escapes antibody neutralization, <i>EMBO Journal</i> , Vol. No. 6, 16, pp. 1189-1198, Oxford University Press (1997).						
	DO	VAN HEEL et al., "A New Generation of the IMAGIC Image Processing System", Journal of Structural Biology, Vol. 116, Article No. 004, pp. 17-24, Academic Press, Inc. (1996).						
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	DQ	VAN RAAIJ et al., "A triple β-spiral in the adenovirus fibre shaft reveals a new structural motif for a fibrous protein", Nature, Vol. 401, pp. 935-938, Macmillan Magazines Ltd (1999).						
	DR	VON SEGGERN et al, "Complementation of a fibre mutant adenovirus by packaging Journal of General Virology, Vol. 79, pp. 1461-1468, SGM (1998).						
	DS	VON SEGGERN et al, "A Helper-Independent Adenovirus Vector with E1, E3, and Fiber Deleted: Structure and Infectivity of Fiberless Particles", <i>Journal of Virology</i> , Vol. 73, No. 2, pp. 1601-1608, American Society for Microbiology (1999).						

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Signature		Considered	11/19/2007

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				Application Number	10/560,250		
ļ II	NFORMATION DIS	CLO	SURE	Filing Date	December 12, 2005		
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		NON PATENT LITERATURE DOCUMENTS			
Initials* No. 1 magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, and/or country where published.  DT VON SEGGERN et al. "Adenovirus Vector Pseudotyping in Fiber-Expressing Cell Lines: Improved Transcution."		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			
		VON SEGGERN et al, "Adenovirus Vector Pseudotyping in Fiber-Expressing Cell Lines: Improved Transcution of Epstein-Barr Virus-Transformed B Cells" <i>Journal of Virology</i> , Vol. 74, No. 1, pp. 354-362, American Society for Microbiology (2000).			
	UQ	WICKAM et al., "Integrins $\alpha_v \beta_3$ and $\alpha_v \beta_5$ Promote Adenovirus Internalization but Not Virus Attachment", Cell, Vol. 73, pp. 309-319 Cell Press (1993).			
	DV	WU et al., "A 50-kDa Membrane Protein Mediates Sialic Acid-Independent Binding and Infection of Conjunctival Cells by Adenovirus Type 37", Virology, Vol. 279, pp. 78-89, Academic Press (2001).			
•	DW	XIA et al., "Crystal structure of the receptor-binding domain of adenovirus type 5 fiber protein at 1.7 A resolution", Structure, Vol. 2, pp. 1259-1270, Current Biology Ltd. (1994).			
$\bigvee$	DX	YU et al., "Cancer vaccines: progress reveals new complexities", Journal of Clinical Investigation, Vol. 110, No. 3, pp.289-94, (2002).			
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Examiner	/Fereydoun Sajjadi/	Date	11/19/2007
Signature	n ereyddun dajjadii	Considered	11/10/2001

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